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EXAMINER

NADKARNI, SARVESH J

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/552,978

**Applicant(s)**

MATSUDA, YOJIRO

**Examiner**

SARVESH J. NADKARNI

**Art Unit**

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/86)  
Paper No(s)/Mail Date 12/13/2006; 12/19/2006; 10/12/2005
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_



**DETAILED ACTION**

**This Office Action is in response to the application filed under 35 U.S.C. 371(c) on October 12, 2005, Application Number: 10/552,978 (hereinafter referred to as “application”) Publication Number: US 2005/0262080 A1. The application is in the national examination stage of PCT/JP04/10081, filed on July 8, 2004, Publication Number: WO/2005/006299 published on January 20, 2005. Page and line number references made in this action relate to the originally filed application, not to either publication. No claims have been amended and no claims are newly added; therefore, claims 1-5 are currently pending. Receipt is acknowledged of the information disclosure statements filed on October 12, 2005; December 13, 2006; and December 19, 2006.**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 5 are rejected under 35 U.S.C. 102 (b) as being anticipated by Mori et al., (US 2001/0043180 A1) hereinafter referred to as the “Mori Publication”.

5. Regarding claim 1, the Mori Publication clearly teaches a **display apparatus** (see at least page 4, paragraph [0050]), **comprising: a display device** (see page 3, paragraph [0041]) **comprising a plurality of pixels arranged in a matrix** (see page 3, paragraph [0041] describing active matrix display further see FIGs. 4 and 5 showing matrix), **a drive circuit for outputting a gradation signal to each of the pixels** (see FIGs. 4 and 5 further described at least at page 1, paragraph [0008]), **and a correction circuit for correcting the gradation signal at each pixel** (see at least FIG. 1 flowchart and FIG. 8 element 2, further described at least at page 3, paragraphs [0039]-[0043] and additionally at least at page 4, paragraphs [0054]-[0056]) **so that a desired gradation can be provided by compensating an influence from adjacent pixels** (see at least FIG. 5 and further described at column [0012]).

6. Regarding claim 2, the Mori Publication **an apparatus according to claim 1** (see above), **wherein the plurality of pixels include a correction pixel** (see at least FIG. 1 further described at least at page 4, paragraphs [0056]-[0058]) **at which a gradation signal is corrected by said correction circuit and adjacent pixels surrounding the correction pixel** (see at least FIG. 1 further illustrated in FIG. 8, and described at least at page 4, paragraphs [0057]-[0068]),

**and said correction circuit obtains a gradation signal, to be corrected, on the basis of information on a gradation to be provided at the correction pixel and information on a gradation to be provided at the adjacent pixels** (see FIG. 1 further described at least at page 1 paragraph [0042, correction circuit based on the same column line having adjacent pixels of target pixel).

7. Regarding claim 5, the Mori Publication clearly teaches **an apparatus according to claim 1** (see above), **wherein the display device is an electrophoretic display device for displaying various information by moving charged electrophoretic particles or a liquid crystal display device for displaying various information by applying a voltage to a liquid crystal** (see at least Abstract describing liquid crystal display).

*Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Mori Publication and further in view of Francis (US 5,841,411) hereinafter referred to as "Francis '411".

10. Regarding claim 3, the Mori Publication clearly teaches **an apparatus according to claim 2** (see above).

11. The Mori Publication does not explicitly teach **said apparatus further comprises a first storing device which stores a relationship between states of the adjacent pixels, a gradation to be provided at the correction pixel, and a gradation signal to be applied to the correction pixel so as to provide a desired gradation at the correction pixel, said correction circuit obtaining the gradation signal to be applied to the correction pixel on the basis of data stored in the first storing device.**

12. In the same field of endeavor, Francis '411 clearly teaches **wherein said apparatus further comprises a first storing device** (see at least column 3, lines 66-67 further continued at column 4, lines 1-20 and additionally at column 8, lines 16-40) **which stores a relationship between states of the adjacent pixels, a gradation to be provided at the correction pixel** (see at least at column 8, lines 16-40 describing adjusted data), **and a gradation signal to be applied to the correction pixel** (see at least at column 8, lines 16-40 describing compensation signal) **so as to provide a desired gradation at the correction pixel** (see at least at column 8, lines 16-40), **said correction circuit obtaining the gradation signal to be applied to the correction pixel on the basis of data stored in the first storing device** (see at least column 4, lines 1-20 further described at least at column 8, lines 16-40).

13. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have been motivated to incorporate the storage device of a display device as taught by Francis '411 into the display apparatus of the Mori Publication because both are within the same field of endeavor, and furthermore, because Francis '411 reduces and improves the effects of cross-talk a common goal within the art (see Francis '411 at least at column 3, lines 8-12).

14. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Mori Publication.

Regarding claim 4, the Mori Publication clearly teaches **an apparatus according to claim 1** (see above). However, the Mori Publication does not explicitly teach **the correction of the gradation signal by the correction circuit is effected when a deviation ratio of a display gradation is out of a predetermined range**. It would have been obvious to one having ordinary skill in the art at the time the invention was made to correct the signal based on a deviation being outside a set range to prevent unnecessarily correcting signals which do not need to be corrected and thereby avoiding unneeded calculations and compensations and conserving energy and time in the process.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARVESH J. NADKARNI whose telephone number is (571)270-1541. The examiner can normally be reached on 11AM-7PM EST Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarvesh J. Nadkarni/  
Examiner – Art Unit 2629

/Amare Mengistu/  
Supervisory Patent Examiner, Art Unit 2629